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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,384	07/12/2001	Suresh Ramaswamy	20366-007360	8045

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EXAMINER

VO, LILIAN

ART UNIT	PAPER NUMBER
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2195

DATE MAILED: 05/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/905,384

Applicant(s)

RAMASWAMY, SURESH

Examiner

Lilian Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

S.O.D

### DETAILED ACTION

1. Claims 1 – 25 are pending.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 10 – 12, 15, 17 – 21 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Bainbridge et al. (US 6,014,700).
4. Regarding **claim 10**, Bainbridge discloses an object distribution system for controlling load distribution during access to objects resident on a plurality of computers attached to a communication network, the system comprising:
  - a client computer attached to the network, wherein a client program is resident on the client computer (fig. 2: 10, 40);
  - a first server attached to the network, wherein a first object is resident on the first server (fig. 2: 20, server1, col. 6, lines 5 – 7, lines 29 - 45);
  - a second server attached to the network, wherein a second object is resident on the second server (fig. 2: 20, server 2), and wherein the first and the second objects perform a function (col. 6, lines 5 – 7, lines 29 - 45); and

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a distributor program for receiving requests for the function and for selecting between the first and the second object to perform the function for the client program (col. 6, lines 5 – 7, lines 29 - 53), wherein the requests are passed from the client program (fig. 2: 10).

5. Regarding **claim 11**, Bainbridge discloses the distributor function balances access between the first and the second objects (col. 7, lines 1 – 4, 7 – 26 and 33 - 44).

6. Regarding **claim 12**, Bainbridge discloses the distributor function balances loading across the first and the second servers (col. 7, lines 1 – 4, 7 – 26 and 33 - 44).

7. Regarding **claim 15**, Bainbridge discloses the first and the second objects are CORBA compliant (col. 2, lines 45 – 55, and fig. 2).

8. Regarding **claim 17**, Bainbridge discloses a method for balancing object and/or server loads across a communication network, wherein the method comprises:

receiving a request for a function from a requesting program (col. 5, lines 56 - 67);

selecting an object to provide the function, wherein the selection involves distributing requests for the function across a plurality of objects providing the function (col. 6, lines 4 - 10);  
and

providing a reference to the selected object to the requesting program (col. 6, lines 28 – 53), wherein the requesting program can access the selected object to perform the function using the reference (col. 7, lines 40 - 49).

9. Regarding **claim 18**, Bainbridge discloses the requesting program is resident on a first computer and the selected object is resident on a second computer (fig. 2: client 10, 40, server group 20), and wherein the function is performed on the second computer and the results of the function are communicated to the requesting program (col. 2, lines 29 – 31, col. 5, lines 55 - 53).

10. Regarding **claim 19**, Bainbridge discloses the selecting of the object to provide the function is performed by a distributor program based on a selection algorithm (col. 6, lines 5 – 7, lines 29 – 45, col. 7, lines 1 – 4, 17 – 26 and 33 - 44).

11. Regarding **claim 20**, Bainbridge discloses the distributor program is resident on a computer where the requesting program resides (fig. 2: client 10, server groups unit 44).

12. Regarding **claim 21**, Bainbridge discloses the distributor program selects an object to perform the function from a group of objects which perform the function (col. 6, lines 5 – 7, lines 29 – 45).

13. Regarding **claim 24**, Bainbridge discloses the distributor checks each of the objects in the group of objects to determine if the objects are available (col. 6, lines 39 – 45, col. 7, lines 1 – 10, 17 - 44).

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 1 – 8, 13, 14, 22, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bainbridge et al. (US 6,014,700, hereinafter Bainbridge) in view Ma et al. (US 6,018,805, hereinafter Ma).

16. Regarding **claim 1**, Bainbridge discloses an object distribution system for distributing access to objects, wherein the objects reside on one or more computers attached to a network (abstract and fig. 2), the system comprising:

a first computer in communication with the network (fig. 2: client 10); wherein the first computer comprises:

a client program (fig. 2 : first application program 40);

a distributor program (fig. 2: server groups unit 44);

a first object proxy, wherein the first object proxy is associated with a first object resident on a computer in communication with the network (fig. 2: proxy object 41, col. 6, lines 1 – 7); and

a second object proxy, wherein the second object proxy is associated with a second object resident on a computer (fig. 2: proxy object 41, col. 6, lines 1 – 7);

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wherein the first object and the second object perform a function (col. 6, lines 5 – 7, lines 29 - 45); and

wherein the distributor program selects between the first and the second object to perform the function for the client program (col. 6, lines 5 – 7, lines 29 - 45); and

an object request broker in communication with the first computer and configured to send a message to the second computer, the message being related to the function (fig. 2: ORB 42. Col. 6, lines 46 – 53).

Bainbridge discloses that a proxy object in conjunction with ORB, forms an object reference from the request which identifies a server group should be used to satisfy the client request (col. 6, lines 1 – 7). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made to recognize that the client machine always has a local proxy object for each remote object in a server on which it communicates/operates with. Bainbridge however did not clearly disclose the first and second objects are on the same computer. Nevertheless, Ma discloses of remote objects 38 on a network node are grouped into folders 32 and 34 in which objects 38 within a folder generally have similar purpose or function (fig. 6 and 7, col. 6, lines 16 – 20, 36 - 53). Therefore, it would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to incorporate Ma's teaching with Bainbridge to have a folder that group objects which perform similar function so that it can be more useful for facilitating system management since individual objects do not have to be separately managed (Ma: col. 6, lines 24 – 26).

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17. Regarding **claim 2**, as modified Bainbridge discloses the distributor program selects between the first and the second objects based on a round robin algorithm (Bainbridge: col. 7, lines 1 – 4, 17 – 26, 33 – 44).

18. Regarding **claim 3**, as modified Bainbridge discloses the objects proxies are maintained in a cache associated with the distributor program (Bainbridge: col. 6, lines 1 – 10, 22– 24, 28 – 45).

19. Regarding **claim 4**, as modified Bainbridge discloses the distributor program checks to determine if the first object is available (Bainbridge: col. 6, lines 39 – 45, col. 7, lines 1 – 10, 17 – 44).

20. Regarding **claim 5**, as modified Bainbridge discloses the distributor program selects the first object to perform the function for the client program only when the first object is available (Bainbridge: col. 6, lines 39 – 45, col. 7, lines 1 – 10, 17 – 44).

21. Regarding **claim 6**, as modified Bainbridge discloses the distributor program identifies the first and the second objects as providing the function (Bainbridge: col. 6, lines 5 – 7, lines 29 – 45) and associated the first and the second objects in an object group (Ma: fig. 6 and 7, col. 6, lines 16 – 20, 36 – 53).



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22. Regarding **claim 7**, as modified Bainbridge discloses the distributor program identifies the first and the second objects using a naming service (Bainbridge: col. 6, lines 4 – 21, 28 – 53).

23. Regarding **claim 8**, as modified Bainbridge discloses the first and the second objects are CORBA compliant (Bainbridge: col. 2, lines 45 – 55, and fig. 2).

24. Regarding **claim 25**, as modified Bainbridge discloses the object request broker resides on the first computer (fig. 2: client 10, ORB 42).

25. **Claims 13, 14, 22 and 23** are rejected on the same ground as stated in claims 6 - 8 above.

26. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bainbridge et al. (US 6,014,700, hereinafter Bainbridge) in view Ma et al. (US 6,018,805, hereinafter Ma), as applied to claim 1 above, and further in view of Banerjee et al. (US 6,704,692, hereinafter Banerjee).

27. Regarding **claim 9**, as modified Bainbridge discloses the distributor program provides for coarse balancing of object distribution (Bainbridge: col. 6, lines 39 – 45 and col. 7, lines 40 – 44) but not for fine balancing of object distribution. Nevertheless, Banerjee discloses the concept of fine grain distributing in which workload is distributed evenly amongst the processors by utilizing fine grain parallelism technique (col. 16, lines 24 – 61). Therefore, it would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to incorporate

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this concept to modified Bainbridge to utilize the concept of fine grain parallelism as applicable to distribute object to reduce the system overhead (col. 16, lines 33 – 36).

28. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bainbridge et al. (US 6,014,700, hereinafter Bainbridge), as applied to claim 10 above, in view of Banerjee et al. (US 6,704,692, hereinafter Banerjee).

29. Regarding **claim 16**, Bainbridge discloses the distributor program provides for coarse balancing of object distribution (col. 6, lines 39 – 45 and col. 7, lines 40 – 44) but not for fine balancing of object distribution. Nevertheless, Banerjee discloses the concept of fine grain distributing in which workload is distributed evenly amongst the processors by utilizing fine grain parallelism technique (col. 16, lines 24 – 61). Therefore, it would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to incorporate this concept to Bainbridge to utilize the concept of fine grain parallelism as applicable to distribute object to reduce the system overhead (col. 16, lines 33 – 36).

### ***Response to Arguments***

30. Applicant's arguments with respect to claims 1, 3, 6, 10, 16 and 17 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is 571-272-3774. The examiner can normally be reached on Monday - Thursday, 7:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist at 571-272-2100.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lilian Vo  
Examiner  
Art Unit 2127

lv  
May 23, 2005

  
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